NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

F A C T S H E E T

(pursuant to NAC 445A.236)

Applicant: Bill Artamenko
Yaweh Farms
1491 Lower Honcut
Oroville, CA 95966

Permit: NEV2006508

Location: Yaweh Farms
Parcel 03-341-06
Tomi Road, I-80 Exit 93
Toulon, Pershing County, Nevada
Latitude: 40° 3.5' N; Longitude: 118° 40' W
Township 25 N, Range 29 E, Section 1 MDB&M

Public Water Supply: The proposed facility is not located within a wellhead capture zone.

General: The Applicant proposes to construct and operate a dewatering facility to process a maximum 30-day average of 50,000 gallons per day of domestic septage supplied by Inviro-Tec of Lincoln, CA at Yaweh Farms. Yaweh Farms is located 3 kilometers west of Toulon, along Tomi (Ragged Top) Road, Pershing County, Nevada. The facility will be located 900 feet south of Tomi Road. The Applicant owns the entire Section 1 of Township 25 N, Range 29 E.

The domestic septage will be dewatered in screen boxes by gravity using a polymer to aid in solids separation. Although the final disposition of the dewatered septage is not restricted by this permit, a maximum of 11,000 wet tons per year of dewatered septage may be transferred to the Yaweh Farms vermiculture facility, NEV2004522. Dewatered septage may also be transferred to other permitted facilities. The majority of the process filtrate is expected to be transferred to the vermiculture facility for use as make-up water. Excess filtrate may be evaporated or transferred to other permitted facilities.

Domestic septage tankers are proposed to be offloaded into a screen box with a ½-inch bar screen for debris removal. The screen box will be in a roll-off configuration with a hinged bar screen. When filled, the unit will be trucked to a landfill for debris disposal. Screened septage will be pumped to one of two 20,000-gallon, steel holding tanks for storage. The tanker off-loading area, screen box, and holding tanks will be located on the smaller of two concrete pads with continuous curbing.

Screened septage will be pumped from the holding tanks to one of two dewatering boxes/filtration chambers. Liquid polymer will be metered into the flow to enhance separation. A lime solution will be injected into the flow downstream of the polymer addition; both injections will occur prior to discharge to one of two steel filtration chambers. As the septage enters a filtration chamber, the liquid portion will flow through a screen with the solids retained. The filtrate will drain from the filtration chambers to the 20,000-gallon steel filtrate storage tank via 3-inch hoses. When sufficient domestic septage has been processed to fill the filtration chamber, the dewatered domestic septage will be dumped on to the concrete pad. The filtration chambers will be pressure washed with all liquids and solids from the cleaning operation draining to a concrete sump and pumped to the storage tanks for subsequent dewatering.

The dewatered domestic septage will be placed in a covered roll-off box and allowed to drain to the concrete sump. This material is proposed to be stored in a roll-off box at a pH of 12 SU for 72 hours with a corresponding temperature greater than 52°C for 12 hours during elevated temperature. The dewatered domestic septage will then be dumped on the concrete pad and loaded into trucks for transport to other permitted facilities. The building for the polymer and lime preparation, the two filtration chambers, the dumping/loading areas, the sump, and the roll-off box storage areas will be located on the larger concrete pad, also with continuous curbing.

The liquid portion of the domestic septage will be pumped to one of the two 60-mil HDPE-lined treatment ponds with a total capacity of one million gallons. The Applicant has elected to construct single-lined ponds with up- and downgradient monitoring wells rather than double-lined ponds with a leak detection and recovery system. The filtrate will be continuously circulated from the pond to the aeration channel to reduce the potential for odors and the pH will be adjusted to approximately 8.5 SU. This water will be used to clean the filtration chambers, the roll-off boxes, and the concrete slab and be transferred to other permitted facilities, primarily NEV2004522.

Under normal dewatering, without lime addition, the solids content of processed septage is between 20 and 23%. However, further moisture loss occurs with the heat of reaction when the pH is raised to 12 or above for 24 hours. This causes the septage to have a solids content of 40-50%.

Dewatered domestic septage transferred to permitted facilities other than NEV2004522 must be transported in Nevada Health Division permitted containers.

Receiving Water Characteristics: The groundwater at the facility is reported to be at a depth in excess of 10 feet below ground surface. There are no wells within a one-mile radius of the facility. The nearest well, 25/30-8c1, is approximately 1.8 miles east of the facility. This well was drilled to 210 feet in 1936 and had a static water level of 14.7 feet in 1946. The next closest well, 26/30-27a1, to the proposed site is located approximately 5 miles to the north-northeast. This 8-inch well was drilled in the alluvial deposits to a depth of 34 feet with a reported static water level of 7 feet in 1954.

A 1965 Water Resource Appraisal of Lovelock Valley, reported that the Well 26/30-27a1 water had a specific conductance of 5,150 micomohs with alkali and salinity hazards defined as high and an elevated boron concentration. The Appraisal determined that this water was unsuitable for irrigation. Other more distant Lower Lovelock wells in the fine grained lacustrine strata also have sodium chloride type water with 1965 TDS concentrations in the 1,600 mg/L to 1,800 mg/L range. Due to well depth and screened interval, data from Well 26/30-27a1 was not provided in the permit application.

The Applicant has not yet constructed the two groundwater monitoring wells that are proposed to be required by the draft permit.

Flow: The Applicant will be authorized to transport a maximum 30-day average of 50,000 gallons per day of domestic septage to the dewatering facility. The dewatered septage, a maximum of 11,000 wet metric tons per year solids is expected to have a solids content of 40–50% and will be transferred to permit NEV2004522. The filtrate will also be transferred to NEV2004522.

Proposed Effluent Limitations: During the period beginning on the effective date of this permit and lasting until the permit expires, the Permittee is authorized to:

-Dewater domestic septage provided by Inviro-Tec of Lincoln, CA;
-Aerate the filtrate in lined ponds for odor control; and

-Transfer the dewatered domestic septage and dewatering filtrate to other permitted facilities, including, but not limited to, the Yaweh Farms Vermiculture Facility, NEV2004522.

Samples taken in compliance with the monitoring requirements specified below shall be collected at the following locations:

a. Domestic septage delivered to the facility;
b. Screened domestic septage stored in the two holding tanks;
c. Dewatered domestic septage stored at the facility;
d. Dewatering filtrate stored in the two ponds;
e. Dewatered domestic septage transferred to NEV2004522;
f. Dewatered domestic septage transferred to other parties, include mass and recipient permit number;
g. Dewatering filtrate transferred to NEV2004522; and
h. Dewatering filtrate transferred to other parties, include volume and recipient permit number.

The dewatered domestic septage shall be limited and monitored by the Applicant as specified below:

MONITORING

CHARACTERISTICS	DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS		
		Sample Location	Measurement Frequency	Sample Type
Domestic Septage Received (gpd)	50,000[1]	a.	Daily	Calculate
Screened Domestic Septage (gal)	40,000	b.	Quarterly	Calculate
Dewatered Domestic Septage (wt)	150 CY	c.	Quarterly	Calculate
	11,000[2]	e.		
	Monitor and Report	f.		
Dewatering Filtrate (gal)	1,000,000	d.	Quarterly	Calculate
	Monitor and Report	g.		
	Monitor and Report	h.		
Total Nitrogen as N (mg/L)	Monitor and Report	d.	Quarterly	Discrete
Total Dissolved Solids (mg/L)	Monitor and Report	d.	Quarterly	Discrete
pH (SU)	Monitor and Report	d.	Quarterly	Discrete
Chlorides (mg/L)	Monitor and Report	d.	Quarterly	Discrete
Fecal Coliform (MPN/100ml)	Monitor and Report	d.	Quarterly	Discrete

Footnotes:
1. 30-day average.
2. Annual Total; report daily dewatered septage delivered to the facility on a quarterly basis.

gpd:	Gallons per day.	mg/L:	Milligrams per liter.
gal:	Gallons.	SU:	Standard units.
wt:	Wet metric tons.	MPN/100 ml:	Most probable number per 100 milliliters.
CY:	Cubic yards.	N:	Nitrogen.

Groundwater Monitoring: Discrete groundwater samples shall be collected to confirm the effective protection of groundwater under the established discharge conditions of this permit.

a. Discrete samples shall be collected from each groundwater monitoring well, including MW-01 and MW-02.

b. Groundwater monitoring wells shall be conspicuously labeled, capped to prevent migration of surface contaminants to the groundwater, and locked to restrict access.

c. The Permittee shall monitor all new and existing groundwater monitoring wells for the following parameters:

GROUNDWATER MONITORING

PARAMETER	LIMITATION	FREQUENCY	SAMPLE TYPE
Depth to Groundwater (feet)	Monitor & Report	Quarterly	Field Measurement
Groundwater Elevation (feet)	Monitor & Report	Quarterly	Calculate
pH (SU)	Monitor & Report	Quarterly	Discrete
Chlorides (mg/L)	Monitor & Report	Quarterly	Discrete
Total Nitrogen as N (mg/L)	10[1]	Quarterly	Discrete
Total Dissolved Solids (mg/L)	Monitor & Report	Quarterly	Discrete

Notes:
1: Downgradient well only.
mg/L: Milligrams per liter. SU: Standard units.
N: Nitrogen.

d. The detection of concentrations of total nitrogen as nitrogen (-N) in the downgradient groundwater sample(s) invoke the following limitations and response requirements:

i. If the total nitrogen-N concentration increases to 7.0 milligrams per liter (mg/L), the Permittee shall submit a double-lined pond, and other facility upgrades as may be necessary, design to the Division for review and approval.

ii. If the total nitrogen-N concentration increases to 9.0 mg/L, construction of an approved double-lined pond and other facility upgrades shall begin.

iii. If the total nitrogen-N concentration increases to 10.0 mg/L, facility operations shall cease.

Schedule of Compliance: The Permittee shall implement and comply with the provisions of the schedule of compliance, including in said implementation and compliance, any additions or modifications which the Administrator may make in approving the schedule of compliance. The Permittee shall implement and/or execute the following scheduled compliance requirements:

a. Upon the effective date of this permit, the Permittee shall achieve compliance with the permit conditions and limitations.

b. At least forty-five (45) days prior to the proposed construction start date, the Permittee shall submit to the Division for review and approval Nevada licensed Professional Engineer

stamped facility design drawings and specifications

c. Within ten (10) days of the start of construction, the Permittee shall notify the Division of the start of construction.

d. At least thirty (30) days prior to the transport of any domestic septage to the facility, the Permittee shall submit to the Division for review and approval an Operations and Maintenance Manual for the dewatering process.

e. Within ten (10) days of the first delivery of domestic septage to the facility, the Permittee shall notify the Division of the initial delivery of septage.

f. Within twenty-one (21) days of the completion of construction, the Permittee shall submit to the Division a stamped statement from a Nevada licensed Professional Engineer that the facility was constructed in accordance with the approved design.

Rationale for Permit Requirements: The proposed facility will be designed and constructed to comply with the State's zero discharge standard of performance; no discharge of fluids or wastes is allowed at the facility. Permit requirements are necessary to determine when design capacity is being approached, to protect waters of the State from degradation, and to prevent the dewatering facility from becoming a public nuisance.

The Division's rationale for the proposed monitoring conditions is as follows:

Domestic Septage Received (Flow): The volume of domestic septage delivered to the facility will be monitored and limited to ensure that the design capacity of the dewatering system is not exceeded.

Screened Domestic Septage: The volume of screened domestic septage stored on-site will be monitored to ensure that the storage capacity of the two holding tanks is not exceeded.

Dewatered Domestic Septage: To avoid having large amounts of dewatered septage accumulate at the facility, a limit of 150 cubic yards of this material stored at the facility at any time is established by the permit. The vermiculture facility, NEV2004522, is permitted to receive up to 11,000 wet tons of dewatered septage per year.

Dewatering Filtrate: The dewatering filtrate stored in the two ponds will be limited to the storage capacity of the pond system, 1,000,000 gallons.

Total Nitrogen as Nitrogen, Total Dissolved Solids, pH, and Chlorides: The concentration of these parameters in the dewatering filtrate ponds will be monitored to determine the potential environmental impact of a release of this fluid.

Fecal Coliform: The fecal coliform density in the stored filtrate will be monitored due to the potential for human contact, especially during transfer to other permitted facilities. Transfer to facilities other than NEV2004522 may require the establishment of permit limitations.

Groundwater Monitoring: Groundwater monitoring is required to verify that groundwater of the State is not degraded by the permitted activity.

Proposed Determination: The Division has made the tentative determination to issue the proposed permit for a five (5) year period.

Procedures for Public Comment: Notice of the Division's intent to issue a permit authorizing the Applicant to dewater domestic septage by gravity separation at Yaweh Farms subject to the conditions contained within the permit, is being sent to the **Lovelock Review-Miner** and the **Reno Gazette-Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing until 5:00 P.M. October 13, 2006, a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State or interstate agency, the Regional Administrator of EPA Region IX or any interested agency, person or group of persons. The request must be filed within the comment period and indicate the interest of the person filing the request and the reasons why a hearing is warranted. Public hearings granted by the Division shall be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.238.

Prepared by: Bruce Holmgren
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